

AMENDMENTS TO THE CLAIMS

1. (currently amended) A method for providing a dynamic continual improvement educational environment ~~that is tailored to an individual learner~~~~for users~~, the method comprising:

using a user interface and a graphical design technique to design an adaptive educational path, wherein the adaptive educational path comprises ~~having a sequence of~~ dynamic educational content and a plurality of educational activities for presentation to ~~one or more users~~~~learners~~, wherein the dynamic educational content is separate and independent from the plurality of educational activities, wherein the design technique automatically produces computer readable instructions relating to the dynamic educational content, and wherein aspects of the educational content are associated in a relational order even, ~~the association capable of being maintained~~ when an aspect of the educational content is moved;

providing a portion of the adaptive educational path for presentation of at least a portion of the educational content to a particular ~~user~~learner;

obtaining and automatically analyzing learner performance data of the particular ~~user~~learner while providing the adaptive educational path, wherein the learner performance data is obtained and analyzed by a system;

using the system to cause the system to automatically and adaptively customize the educational path to the particular learner, wherein the customizing of the educational path comprises:

identifying which portions of the educational content and the educational activities are to be combined and presented to the learner based upon the learner performance data obtained and analyzed by the system;

combining the identified portions of the educational content and the educational activities; and

~~sequence~~-sequencing the combined dynamic~~-educational content and educational activities for the particular user~~learner based upon the learner performance data obtained and analyzed by the system, wherein the adaptive sequencing comprises modifying the presentation-combination of the educational content and educational activities ~~to the particular user~~ based upon the learner performance data, ~~wherein the presentation to the particular user comprises the adaptive sequencing of the dynamic educational content for the particular user;~~ and

providing portions of the adaptive educational path~~educational content~~ for iteratively ~~presenting at least a portion of the~~iterative presentation to the particular ~~user~~learner over an extended period of time to maintain the ~~particular user~~learner's understanding of the educational content.

2. (currently amended) A method as recited in claim 1, wherein the adaptive sequencing is ordered based upon a characteristic of the particular ~~user~~learner, the characteristic being at least one of:

- (i) a learning pace of the particular ~~user~~learner;
- (ii) a background of the particular ~~user~~learner;
- (iii) a style of learning of the particular ~~user~~learner; and
- (iv) a learning progress of the particular ~~user~~learner.

3. (currently amended) A method as recited in claim 2, wherein said ~~iteratively~~ presenting ~~at least a portion of the~~iterative presentation to the particular user-learner over an extended period of time comprises a step for providing a systematic spaced review of portions of the educational content to the particular user-learner based on the particular user-learner performance data.

4. (previously presented) A method as recited in claim 3, wherein the systematic spaced review is further based on dynamic parameters of a minimum delay and a maximum delay of the review, wherein the dynamic parameters are selectively adjustable by an instructional designer.

5. (currently amended) A method as recited in claim 3, wherein the particular user learner performance data corresponds to at least one of (i) the particular user's-learner's accuracy and (ii) the particular user's-learner's speed in understanding the educational content.

6. (cancelled)

7. (cancelled)

8. (currently amended) A method as recited in claim 1, wherein the design technique comprises at least one of:

- (i) an object oriented technique that graphically relates ~~components~~at least some of the educational content with at least some of the educational activities; and
- (ii) a drag-and-drop technique that graphically relates at least some components—of the educational content with at least some of the educational activities.

9. (currently amended) A method as recited in claim 8, wherein said association comprises ~~linking available components of the said~~ combining of the identified portions of the educational content and the educational activities~~based on specific properties of the available components.~~

10. (cancelled)

11. (cancelled)

12. (currently amended) A method as recited in claim 1, wherein the step for using an interface and a graphical design technique comprises:

designing a collaborative activity among ~~users~~learners; and
dynamically linking roles of the ~~users~~learners in the collaborative activity.

13. (cancelled)

14. (currently amended) A method as recited in claim 1, wherein the adaptive educational path provides an order for which concepts are to be learned by the particular ~~user~~ learner within a lesson.

15. (previously presented) A method as recited in claim 14, wherein the adaptive educational path comprises at least one of:

- (i) a linear sequence of activities; and
- (ii) an adaptive sequence of activities.

16. (previously presented) A method as recited in claim 14, wherein the adaptive educational path includes one or more stage markers that delineate meaningful stages of learning.

17. (currently amended) A method as recited in claim 1, wherein the step for using an interface and a graphical design technique to design an adaptive educational path comprises automatically snapping activity icons to a grid.

18. (currently amended) A method as recited in claim 17, wherein the step for using an interface and a graphical design technique to design an adaptive educational path further comprises selectively organizing the activity icons to develop a flow of activities.

19. (original) A method as recited in claim 18, wherein movement of an activity icon within the flow of activities includes maintaining relationships with other activities branching the activity icon that is being moved.

20. (previously presented) A method as recited in claim 1, wherein the adaptive educational path includes a systematic spaced review of an educational lesson.

21. (currently amended) A method as recited in claim 2, wherein the step for using an interface and a graphical design technique to design an adaptive educational path includes designing an environment that includes a look and feel that is customized to a particular audience.

22. (currently amended) A method as recited in claim 1, further comprising designing a least a portion of said dynamic education content comprising at least one of:

selectively cutting an audio file into smaller files that are named and preserved;

modifying a start position of a selected audio file;

modifying an end position of a selected audio file;

graphically associating educational concept types with relationship types and properties;

graphically identifying potential presentation problems corresponding to the educational content;

automatically adding new educational content from outside resources;

selectively tagging educational portions of a particular lesson to illustrate to the particular user learner different contextual uses of the educational portions; and
utilizing a repository of media for designing the educational content.

23. (currently amended) A method as recited in claim 1, wherein the step for using an interface and a graphical design technique to design an adaptive educational path comprises automatically analyzing data to identify said associations.

24. (previously presented) A method as recited in claim 1, further comprising designing dynamic educational content for presentation comprising:

executing automated tests on components to ensure that the components function as designed; and

diagnosing any errors in the components.

25. (currently amended) A method as recited in claim 1, wherein the step for using an interface and a graphical design technique to design an adaptive educational path does not require that the designing be performed at the code level by a computer programmer.

26. (previously presented) A method as recited in claim 24, wherein the step for designing dynamic educational content for presentation comprises detecting any potential problems in the designed content for repair.

27. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation comprises:

automatically identifying a current activity used in presenting a portion of the educational content presented to the particular user/learner;

keeping track of a learning progress of the particular user/learner; and

automatically and adaptively determining which activity to present-use next to present the portion of the educational content to the particular user/learner.

28. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation comprises automatically evaluating activity branching conditions upon completion of an activity for branches emanating from the completed activity.

29. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation comprises:

automatically monitoring the educational progress of the particular user/learner;

if an educational lesson is not understood by the particular user/learner, performing at least one of:

- (i) selectively repeating at least a portion of an adaptive path related to the educational lesson; and
- (ii) presenting a related activity to assist the particular user-learner in understanding the educational lesson; and

if the educational lesson is understood by the particular ~~user~~learner, following another adaptive path that relates to a subsequent lesson.

30. (currently amended) A method as recited in claim 1, wherein the step for providing ~~portions of the adaptive educational path content for iterative~~ presentation comprises automatically providing positive feedback to the particular ~~user~~learner as aspects of the educational content are learned.

31. (currently amended) A method as recited in claim 1, further comprising tracking the progress of the particular ~~user~~learner and generating a report relating to the particular ~~user's~~learner's progress.

32. (previously presented) A method as recited in claim 1, further comprising monitoring implementation fidelity to perform at least one of:

- (i) ensuring that the presentation is performed as intended by the designer and that the results of the presentation are reliable;
- (ii) measuring the degree to which teachers, tutors and students implement the presentation as designed and the degree to which learners, the tutors and administrators who interact with and contribute to any learning experience are encouraged to comply to system-determined guidelines; and
- (iii) automatically reporting results of the implementation fidelity.

33. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation further comprises evaluating the learning of the educational content.

34. (currently amended) A method as recited in claim 33, wherein the step for providing portions of the adaptive-educational path-content for iteratively-iterative presentation ~~presenting a least a portion of the presentation further~~ comprises modifying the frequency for presenting the portions of the educational content based on the learning of the educational content.

35. (currently amended) A method as recited in claim 33, wherein the step for evaluating the learning of the educational content by the particular ~~user-learner~~ includes automatically conducting experiments on the particular ~~user-learner~~ to identify an optimal instructional setting for the particular ~~user~~learner.

36. (original) A method as recited in claim 33, wherein the step for evaluating the learning of the educational content includes automatically analyzing experimental data obtained.

37. (previously presented) A method as recited in claim 1, wherein the relational order is an hierarchical order.

38. (cancelled)

39. (previously presented) A method as recited in claim 1, wherein said obtaining learner performance data includes a step for allowing a designer to determine the type of information that is to be obtained.

40. (currently amended) A method as recited in claim 1, wherein the learner performance data includes at least one of:

- (i) a period of time;
- (ii) a number of questions;
- (iii) a number of answers;
- (iv) a number of times the particular user's learner's voice was recorded;
- (v) information accessed;
- (vi) a number of particular user-learner interactions;
- (vii) particular user-learner interactions;
- (viii) audio recording of the particular user-learner;
- (ix) text from the particular user-learner;
- (x) a conversation between multiple users-learners, wherein one of the multiple users-learners is the particular user-learner;
- (xi) a conversation between a computer device and the particular user-learner;
- (xii) a response to content presented;
- (xiii) graphical data created by the particular user-learner; and
- (xiv) any input received from the particular user-learner.

41. (previously presented) A method as recited in claim 1, further comprising designing dynamic educational content for presentation using at least one of:

- (i) component modules, wherein the component modules are reusable for designing other dynamic educational content, thereby causing a process of designing dynamic educational content for presentation to be efficient; and
- (ii) dynamic activities, wherein the dynamic activities are reusable for designing other dynamic educational content, thereby causing a process of designing dynamic educational content for presentation to be efficient.

42. (currently amended) A method as recited in claim 1, wherein the step for using an interface and a graphical design technique to design an adaptive educational path includes a step for allowing at least a portion of the content to be selectively supported by any of a number of output layout formats.

43. (previously presented) A method as recited in claim 1, further comprising a step for selectively and instantly changing a look and feel of the presentation.

44. (currently amended) A method as recited in claim 2, further comprising a step for grouping experimental data to determine information relating to one or more groups to which the particular user-learner belongs.

45. (currently amended) A method as recited in claim 44, wherein the step for providing the adaptive educational path for presentation includes implementing the at least a portion of the presentation based on the particular user's-learner's similarity to other users learners for which optimum settings have been established.

46. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation includes a step for conducting experiments using an experimental unit that is at least one of:

- (i) a particular concept;
- (ii) a particular learner type; and
- (iii) a particular learner.

47. (currently amended) A method as recited in claim 2, further comprising a step for automatically generating a report relating to at least one of:

- (i) the presentation; and
- (ii) the particular user's-learner's performance.

48. (currently amended) A method as recited in claim 1, wherein the step for providing portions of the adaptive-educational path-content for iterative presentation includes selectively prioritizing aspects of the presentation, wherein the aspects are at least one of:

- (i) activities;
- (ii) lessons; and
- (iii) tasks.

49. (currently amended) A method as recited in claim 1, further comprising a step for selectively displaying the particular user's learner's progress.

50. (currently amended) A dynamic continual improvement educational system that is tailored to an individual learner, the system comprising:

a computer system having a development module, an implementation module, an analysis module, and an output device, wherein the output device displays a user interface that enables a user to utilize a graphical design technique for designing an adaptive educational path, wherein the adaptive educational path comprises having a sequence of dynamic educational content and a plurality of educational activities for presentation to one or more users|learners, wherein the dynamic educational content is separate and independent from the plurality of educational activities, wherein the design technique automatically produces computer readable instructions relating to the dynamic educational content; and

the dynamic educational content designed for presentation to users|learners, wherein the adaptive educational path includes structural components that are graphically associated in a relational order on the user interface even when any of the structural components are moved, and wherein at least a portion of the dynamic-educational content path is adaptively sequenced-customized for a particular user-learner by obtaining and automatically analyzing learner performance data of the particular user-learner while providing a portion of the adaptive path, wherein the learner performance data is obtained and analyzed by the computer system to cause the system to automatically and adaptively sequence the dynamic-educational content-path for the particular user-learner, wherein the customizing of the educational path comprises:

identifying which portions of the educational content and the educational activities are to be combined and presented to the learner based upon the learner performance data obtained and analyzed by the system;

combining the identified portions of the educational content and the educational activities; and

sequencing the combined educational content and educational activities for the learner based upon the learner performance data obtained and analyzed by the system, wherein the sequencing comprises modifying the combination of the educational content and educational activities based upon the learner performance data; and

~~based upon the learner performance data obtained and analyzed by the system,~~
wherein the adaptive ~~sequencing~~ customization comprises a modification to the educational content ~~path presentation~~ based upon the learner performance data, the adaptive ~~sequencing~~ customization being ordered based upon a characteristic of the particular user ~~learner~~ and ~~is portions of the educational content are~~ iteratively presented to the particular user ~~learner~~ over an extended period of time to maintain the particular user's ~~learner's~~ understanding of the educational content.

51. (currently amended) A system as recited in claim 50, wherein the characteristic is at least one of:

- (i) a learning pace of the particular user~~learner~~;
- (ii) a background of the particular user~~learner~~;
- (iii) a style of learning of the particular user~~learner~~; and
- (iv) a learning progress of the particular user~~learner~~.

52. (currently amended) A system as recited in claim 51, wherein the ~~graphical~~-user interface is configured for use in assembling activities from the structural components to design the adaptive educational path, and wherein the interface facilitates the creation of adaptively sequenced instruction.

53. (previously presented) A system as recited in claim 51, further comprising a computer device communicatively coupled to the computer system and configured to enable an exchange of information between the computer device and the computer system.

54. (original) A system as recited in claim 53, wherein the communications mechanism is a network.

55. (original) A system as recited in claim 54, wherein the network is the internet.

56. (cancelled)

57. (previously presented) A system as recited in claim 53, wherein the graphical user interface includes a grid on which the adaptive educational path is created by automatically snapping activity icons to the grid and providing a relationship between the activity icons.

58. (currently amended) A continual improvement educational process that is tailored to an individual learner, the process comprising:

a development module for designing an adaptive educational path using a user interface and a design technique, wherein the design technique automatically produces computer readable instructions relating to the dynamic educational content without causing a designer to encode the instructions, wherein the adaptive educational path comprises dynamic educational content and a plurality of educational activities for presentation to learners, and wherein the dynamic educational content is separate and independent from the plurality of educational activities;

the dynamic educational content for presentation to a user/learners, wherein the adaptive educational path comprises a sequence of at least some of the dynamic educational content for presentation to the a user/particular learner, wherein aspects of the educational content are graphically associated in a relational order on the user interface, the association capable of being maintained even when an aspect of the educational content is moved;

an implementation module associated with the development module for selectively implementing the presentation of the educational content to the user/learner, wherein the presentation is automatically adapted to a characteristic of the user/learner, and for iteratively implementing at least a portion of the presentation to the user-/learner over an extended period of time to maintain the user's-/learner's understanding of the educational content; and

an analysis module associated with the implementation module for determining the learning pace of the user-/learner and the user's-/learner's understanding of the

educational content, the analysis module obtaining and automatically analyzing learner performance data of the user/learner while providing the adaptive educational path, wherein the learner performance data is obtained and analyzed by the analysis module to cause the analysis module to automatically and adaptively sequence–customize the educational path to the learner, wherein the customizing of the educational path comprises:

identifying which portions of the educational content and the educational activities are to be combined and presented to the learner based upon the learner performance data obtained and analyzed by the system;

combining the identified portions of the educational content and the educational activities; and

sequencing the combined educational content and educational activities for the learner based upon the learner performance data obtained and analyzed by the system, wherein the sequencing comprises modifying the combination of the educational content and educational activities based upon the learner performance data; and

the dynamic educational content for the user based upon the learner performance data obtained and analyzed by the analysis module, wherein the adaptive sequencing customization comprises modifying presentation of the educational content–path to the user/learner based upon the learner performance data.

59. (currently amended) A continual improvement educational process as recited in claim 58, wherein the characteristic is at least one of:

- (i) a learning pace of the ~~user~~learner;
- (ii) a background of the ~~user~~learner;
- (iii) a style of learning of the ~~learner~~user; and
- (iv) a learning progress of the ~~learner~~user.

60. (original) A continual improvement educational process as recited in claim 59, further comprising an implementation fidelity module associated with the implementation module for:

ensuring genuine fidelity of the presentation of the educational content; and
measuring and encouraging fidelity to system-determined guidelines for learners, tutors, and administrators who interact with and contribute to a learning experience.

61. (currently amended) A computer program product for implementing within a computer system a method for providing a dynamic continual improvement educational environment that is tailored to an individual learner, the computer program product comprising:

a computer readable medium encoded with computer executable code utilized to implement the method, the method comprising:

receiving input through a design technique to display an adaptive educational path on a user interface, the adaptive educational path having a ~~sequence of~~ dynamic educational content and a plurality of educational activities for presentation to ~~a user~~ learners, wherein the dynamic educational content is separate and independent from the plurality of educational activities, wherein the design technique automatically produces computer readable instructions relating to the dynamic educational content, and wherein aspects of the educational content are associated in a relational order even ~~the association capable of being maintained when an aspect of the educational content is moved;~~

obtaining and automatically analyzing learner performance data of ~~the user~~ a particular learner, wherein the learner performance data is obtained and analyzed by the system to cause the system to automatically and adaptively ~~sequence~~ customize the educational path, wherein the customizing of the educational path comprises:

identifying which portions of the educational content and the educational activities are to be combined and presented to the learner based upon the learner performance data obtained and analyzed by the system;

combining the identified portions of the educational content and the educational activities; and

sequencing the combined educational content and educational activities for the learner based upon the learner performance data obtained and analyzed by the system, wherein the sequencing comprises modifying the combination of the educational content and educational activities based upon the learner performance data; and

~~dynamic educational content for the user based upon the learner performance data obtained and analyzed by the system, wherein the adaptive sequencing comprises modifying the presentation of the educational content to the user based upon the learner performance data;~~

displaying the adaptively combined educational content and educational activities~~sequenced presentation of the educational content~~ on an output device to the user~~learner~~, wherein the ~~presentation sequencing~~ is automatically adapted to a characteristic of the user~~learner~~; and

iteratively implementing presenting at least a portion of the presentation educational content to the user~~learner~~ over an extended period of time to maintain the user's~~learner's~~ understanding of the educational content.

62. (currently amended) A computer program product as recited in claim 61, wherein the characteristic is at least one of:

- (i) a learning pace of the ~~user~~learner;
- (ii) a background of the ~~user~~learner;
- (iii) a style of learning of the ~~user~~learner; and
- (iv) a learning progress of the ~~user~~learner.

63. (currently amended) A computer program product as recited in claim 62, wherein the step for iteratively ~~implementing-presenting~~ at least a portion of the ~~presentation-educational content~~ to the ~~user-learner~~ over an extended period of time comprises a step for automatically providing a systematic spaced review of the educational content to the ~~user-learner~~ based on the ~~user's-learner's~~ performance, including the ~~user's-learner's~~ accuracy and speed in understanding the educational content.

64. (cancelled)

65. (previously presented) A computer program product as recited in claim 62, wherein the association is between available components of the educational content based on specific properties of the available components.

66. (cancelled)

67. (previously presented) A computer program product as recited in claim 62,

wherein the adaptive education path provides a flow of activities for selective presentation to the user-learner to teach a particular educational lesson.

68. (previously presented) A computer program product as recited in claim 67, wherein the flow of activities are automatically snapped as activity icons to a grid.

69. (previously presented) A computer program product as recited in claim 68, wherein the method further comprises, upon receiving input to move an activity icon within the flow of activities, automatically and graphically maintaining relationships with other activities branching the activity icon that is moved.

70. (previously presented) A computer program product as recited in claim 62, wherein the method further comprises:

executing automated tests on components to ensure that the components function as designed; and

diagnose any errors in the components.